

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Petition for Rulemaking to Amend the)	
Commission's Rules Regarding the Citizens)	RM-11788
Broadband Radio Service in the 3550-3700 MHz)	
Band)	
)	
Petition for Rulemaking to Maximize)	
Deployment of 5G Technologies in the Citizens)	RM-11789
Broadband Radio Service)	
)	
)	
Amendment of the Commission's Rules with)	
Regard to Commercial Operations in the 3550-)	GN Docket No. 12-354
3650 MHz Band)	
)	

To: The Wireless Telecommunications Bureau

REPLY COMMENTS OF THE UTILITIES TECHNOLOGY COUNCIL

The Utilities Technology Council (UTC) hereby files the following reply comments in response to the Wireless Telecommunications Bureau's Public Notice in the above-referenced proceeding.¹ UTC opposes the petitions by T-Mobile and CTIA, because they would significantly revise the rules for the Citizens Broadband Radio Service (CBRS) in the 3.5 GHz band before the existing rules for the band have been given a chance to work. Moreover, the proposals in the petitions would potentially make it more difficult for utilities to access spectrum in the 3.5 GHz band and to protect their existing systems against interference. Comments on the record also overwhelmingly oppose the petitions for these and other reasons.

¹ See Wireless Telecommunications Bureau and Office of Engineering and Technology Seek Comment on Petitions for Rulemaking Regarding the Citizens Broadband Radio Service, GN Docket No. 12-354, *Public Notice*, DA 17-609 (rel. June 22, 2017) (*Public Notice*). See also CTIA, Petition for Rulemaking, GN Docket No. 12-354 (filed June 16, 2017)(hereinafter "CTIA Petition"); T-Mobile USA, Inc., Petition for Rulemaking, GN Docket No. 12-354 (filed June 19, 2017)(hereinafter "T-Mobile Petition") (collectively, "Petitions").

I. Introduction

UTC is the international association for the telecommunications and information technology interests of electric, gas and water utilities and other critical infrastructure industries. Its members include all kinds of utilities, ranging from large investor-owned utilities that serve millions of customers across multi-state service territories to smaller rural electric cooperative utilities and public power utilities who may serve only a few thousand customers in isolated communities or remote areas of the country. These members all own, manage and control extensive energy and water transmission and distribution networks, which are supported by wireless and wireline communications systems. Owing to the critical nature of the underlying energy and water systems that they support, utility private internal communications systems are designed, built, and maintained to exceptionally high standards for reliability and security. These private internal communications networks are more reliable and resilient than commercial networks, and they are predicated on the need to maintain communications during emergencies, such as power outages in the aftermath of storms, and to communicate in remote areas where commercial networks may not provide coverage. While utilities have extensive and highly reliable communications systems, they need additional suitable spectrum to provide additional capacity and coverage to support increasing communications demands due to smart grid and security requirements.

UTC has been an active participant in this proceeding from its inception, and its interest has been and continues to be promoting the opportunity for utilities to access and make effective use of the 3.5 GHz band to support highly reliable mission critical communications. As the Commission is aware, utilities have extensive communications networks in the 3650-3700 MHz (i.e. 3.65 GHz) part of the 3.5 GHz band, which were licensed under the FCC's Part 90 rules and which currently are grandfathered during the transition period to the FCC's Part 96 rules for the CBRS. UTC has advocated for policies that would protect these incumbent 3.65 GHz systems from interference from CBRS operations. Utilities have extensive communications systems in

the 3.65 GHz band. Some have thousands of locations. Utilities use the 3.65 GHz band for applications, such as Supervisory Control and Data Acquisition (SCADA), Distribution Automation (DA), Advanced Metering Infrastructure (AMI) and telemetry, which are used to monitor and control the safe, reliable and efficient delivery of essential, electric, gas and water services to the public at large. Utilities have made substantial investments in these systems and continue to expand existing systems in order to increase capacity and coverage to keep pace with increasing demands and to maintain operational reliability, safety and security. Utilities are also interested in access to additional spectrum in the 3.5 GHz band in order to provide additional capacity to support network expansion.

In their two separate petitions, CTIA and T-Mobile propose that the Commission extend Priority Access License (PAL) terms from 3 years to 10 years and add a “renewal expectancy.”² They also propose that the Commission conduct PAL auctions based on Partial Economic Areas (PEAs) instead of census tracts. In addition, T-Mobile proposes that the Commission allow PALs in the existing 3650-3700 MHz band and eliminate the General Authorized Access (GAA) spectrum allocation (although GAA would still be available on an opportunistic basis when and where PALs are not in use). T-Mobile also proposes that the Commission set a 50 megahertz spectrum cap for licenses in a given market area, which will permit a minimum of three entities to be licensed for the 3.5 GHz spectrum in a market area.³

II. The Proposed Rules in the Petitions Would Disrupt Innovation and Investment in the 3.5 GHz Band.

In establishing the rules for the band, the Commission sought to promote access to the 3.5 GHz band by utilities. The Commission stated that:

Manufacturers, utilities, and other large industries can construct private wireless broadband networks to automate processes that require some measure of interference protection and yet are not appropriately outsourced to a commercial cellular network. Smart grid, rural broadband, small cell backhaul, and other point-to-multipoint

² CTIA Petition at 6-10. T-Mobile Petition at 9-11 and 16-19.

³ T-Mobile Petition at 9.

networks can potentially access three times more bandwidth than was available under our previous 3650-3700 MHz band rules. All of these applications could share common wireless technologies, providing economies of scale and facilitating intensive use of the spectrum.⁴

Comments on the record report that many of these applications are already being developed for use in the band.⁵

UTC opposes the proposals in the petitions because they would make it more difficult for utilities to be able to access spectrum in the 3.5 GHz band and would threaten to cause interference to incumbent utility systems in the 3.65 GHz part of the band. Specifically, ten-year license terms and PEA geographic area licenses would likely increase the cost of access to PALs that are auctioned. Moreover, T-Mobile's proposal to assign the entire 3.5 GHz band using PALs and provide a 50 MHz spectrum cap appears designed so that the three nationwide commercial wireless carriers could monopolize all of the 150 MHz of available spectrum in a given area.

UTC is particularly opposed to assigning PALs in the 3.65 GHz part of the band because it would increase the potential for interference to incumbent utility systems, and would give priority to PAL operations, such that utilities would be required to accept interference from and not cause interference to PAL operations. Finally, it appears unlikely that secondary markets for access to this spectrum would result from these proposals, because the major wireless carriers would have little incentive to disaggregate or partition their licenses and lease capacity to utilities or other third parties.

The comments on the record underscore UTC's concerns about the proposals in the

⁴ *Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, Report and Order and Second Further Notice of Proposed Rulemaking, 30 FCC Rcd 3959 at 3962 ¶ 6 (2015) ("CBRS Order").

⁵ See e.g. Comments of Motorola in GN Docket No. 12-354 (filed July 24, 2017) ("MSI believes that there are a variety of industrial and enterprise sectors such as oil & gas companies, utilities and other critical infrastructure entities, industrial and manufacturing, mining, hospitality, and others that would benefit from the regulatory structure developed by the Commission.") See also Comments of Google at 5-8 (describing progress that has been made by WInnForum and market developments, including an effort that is underway by GE and Qualcomm to develop LTE-based solutions for Internet-of-Things applications in the 3.5 GHz band.)

petitions. As Southern Linc points out, “any extension of the license term for PALs will concurrently make the cost of obtaining PALs that much more expensive and could drive the cost of PALs beyond what many of the potential users of the CBRS band, such as smaller commercial entities and private network operators, could afford.”⁶ Moreover, “[c]hanging the licensing framework of the CBRS band to conform with the existing licensing models for other bands would defeat the entire purpose of making this band ‘hospitable to a wide variety of users, deployment models, and business cases, *including some solutions to market needs not adequately served by [the FCC’s] conventional licensed or unlicensed rules.*”⁷

When the Commission established the CBRS licensing rules, it specifically rejected the same arguments by the major wireless carriers then that they are making now, namely that longer license terms and larger geographic area licenses are needed to promote investment in the band. Specifically, the Commission determined that:

The combination of fixed channel assignments for PALs and indefinite license renewals [proposed by AT&T, and other major wireless providers and their equipment suppliers] could permanently prevent GAA use of certain portions of the band, particularly in regions of high commercial interest, even after the “transition” period concludes. These proposals could also preclude investment from a newer generation of Priority Access Licensees in the future.⁸

As Google pointed out in its comments, the Commission continues to reject the wireless carriers’ arguments that smaller geographic areas will discourage investment. In its Spectrum Frontiers Order, the Commission explained that smaller license areas would (1) “afford[] a licensee the flexibility to develop localized services”; (2) “allow[] for targeted deployments based on market forces and customer demand”; and (3) “facilitate[] access by

⁶ Comments of Southern Linc in GN Docket No. 12-354 at 6 (filed July 24, 2017).

⁷ *Id.* at 6-7, quoting *Amendment of the Commission’s Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, Report and Order and Second Further Notice of Proposed Rulemaking, 30 FCC Rcd 3959 at 3962 ¶ 6 (emphasis added).

⁸ *CBRS Order*, 30 FCC Rcd 3959 at ¶58.

both smaller and larger carriers.”⁹ Similarly, the Commission should reject wireless carriers’ arguments in their petitions that longer license terms and larger geographic areas will naturally lead to greater investment in the 3.5 GHz band.

In carving out the 3.5 GHz band for spectrum sharing, the Commission sought to encourage innovative uses of the band.¹⁰ It explained that “[t]he larger, traditional license areas favored by some commenters are inconsistent with our desire to promote innovative, low power uses in this band, such as small cells, which align well with small, targeted geographic areas such as census tracts. Further, traditional licensing areas will not allow users of the band to acquire PALs only for those specific geographic areas they intend to serve.” As numerous comments point out, there are various examples of innovation in the 3.5 GHz band already. The Commission should allow this innovation to continue and should not revise the rules as proposed in the petitions, which would likely harm innovation, create regulatory uncertainty and discourage investment in the band.

III. The Commission Should Not Permit PALs in the 3650-3700 MHz Band.

In establishing the rules for the 3.5 GHz band, the Commission was careful to establish safeguards to protect the significant investments that utilities had made in systems in the 3.65 GHz band. The Commission wrote that “limiting the 3650–3700 MHz band to GAA use post-transition, rather than adopting our original proposal to allow both PALs and GAA use, will minimize disruption to incumbent operators. By eliminating the availability of PALs in the 3650–3700 MHz portion of the band, incumbent operators will continue to

⁹ Comments of Google and Alphabet Access in Response to Petitions for Rulemaking, GN Docket No. 12-354 (filed July 24, 2017), *quoting Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, Report and Order, 31 FCC Rcd. 8014, ¶¶ 35 (2016)(hereinafter “Spectrum Frontiers Order”).

¹⁰ *CBRS Order* at ¶63 (stating “[w]e continue to believe that ensuring that a stable and significant quantity of spectrum is available for both Priority Access Licensees and GAA will foster innovation, encourage efficient use of the band, and create an environment conducive to a wide array of potential users and uses.”)

have access to the entire 50 MHz, post-transition.”¹¹

UTC is opposed to the proposal by T-Mobile to allow PALs in the 3.65 GHz part of the band because it will threaten to cause interference to incumbent systems and would prevent utilities with incumbent systems from accessing the entire 50 MHz of spectrum. Other comments on the record express similar concerns.¹² As EWA explained in its comments, “limiting sharing to GAA, and not PAL, operations represented the least objectionable balancing of the various types of uses the Commission expects to be deployed across this allocation.”¹³ Conversely, “[e]xpanding the availability of this portion of the band as requested by T-Mobile would disrupt the FCC’s careful calibration before it even has been tested and cannot be viewed as serving the public interest.”¹⁴ UTC agrees with these comments that the Commission should not now be upsetting the safeguards that it put in place to protect incumbents in the 3.65 GHz part of the band just as the Commission is in the process of developing grandfathered wireless protection zones, as well as selecting the Spectrum Access Database Administrator and the Environmental Sensing Capability Operator.¹⁵ This is yet another significant reason why the Commission should reject the proposal by T-Mobile to license the band exclusively for PALs.

¹¹ *Id.* at ¶410. *See also Id.* at ¶395 (stating “our decision not to allow Priority Access use in the 3650-3700 MHz band segment means that this portion of the band will continue to be licensed on a non-exclusive basis, and thus will continue to be available on a non-exclusive basis to former Part 90 incumbents.”)

¹² *See e.g.* Comments of NCTA—The Internet and Television Association at 14 (stating that “NCTA agrees that opportunistic users have a proven track record of successfully protecting incumbent operations and that making available the 3650-3700 MHz band for GAA rather than PAL use would smooth the transition and promote harmony in the shared band.”)

¹³ Comments of the Enterprise Wireless Alliance in GN Docket No. 12-354 at 4 (filed July 24, 2017).

¹⁴ *Id.* at 4-5.

¹⁵ *Id.* at 3. *See also* Comments of Leidos in GN Docket No. 12-354 at 3 (filed July 24, 2017)(“In addition, the Commission should consider extending the interference protection period to grandfathered operators by an additional five years. This additional time would be instrumental for ensuring no interruption to critical services during the transition to any new rules adopted by the Commission.”)

Conclusion

In conclusion, UTC opposes the petitions by CTIA and T-Mobile and urges the Commission to retain the existing CBRS rules for the 3.5 GHz band. Comments on the record echo UTC's concerns that the petitions would prevent innovation and investment in the band and that it would threaten to result in interference to existing systems in the 3.65 GHz band, thereby undermining the significant investments that utilities and others have made in these systems.

Respectfully,

Utilities Technology Council

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August 8, 2017